code synchronization detection information broadcast means provided in said base station for broadcasting the state information of a channel card in real time for said terminals to recognize the code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of the preambles transmitted from said terminals through said reverse common channel; and

data transmission determination means provided in said terminals for making the terminals to have attempted data transmission in the same time slot with the data of said code synchronization detection continue data transmission and the other terminals stop data transmission.

13. A method for making a plurality of terminals have a random access to the reverse common channel of a base station in CDMA, comprising the steps of:

broadcasting from said base station the state information of a channel card in real time for said terminals to recognize the code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of the preambles transmitted from said terminals through said reverse common channel; and

making the terminals to have attempted data transmission in the same time slot with the data of said code synchronization detection continue data transmission and the other terminals stop data transmission.

Add the following new claims:

25. An apparatus for making a plurality of terminals have a random access to the reverse common channel of a base station in CDMA, comprising:

code synchronization detection information broadcast means provided in said base station for broadcasting the state information of a channel card in real time for said terminals to recognize the code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of the preambles transmitted from said terminals through said reverse common channel; and

data transmission determination means provided in said terminals for making the terminals to have acquired the code synchronization of the transmitted preambles in said base station continue data transmission and the other terminals stop data transmission,

wherein each of said terminals comprises:

a data generator for generating the data transmitted to said base station;

a data transmitter for transmitting said data generated from said data generator;

a terminal RF signal processor for converting said data from said data transmitter into an RF signal transmitted to said base station and for processing an RF signal received from said base station;

a broadcast signal receiver for receiving a broadcast signal from said terminal RF signal processor to determine the data transmission; and

data transmission determination circuit for controlling said data transmitter to determine whether to make an attempt of transmitting data or to keep on transmitting the data presently under transmission according to said broadcast signal,

wherein, when said data transmission determination circuit receives a broadcast signal representing the detection of the code synchronization in a time slot from said base station, it holds the data transmission until receiving a broadcast signal representing the code synchronization not acquired when it does not perform data transmission or keeps on transmitting data when it has attempted the data transmission in the time slot corresponding to said broadcast signal or stops the data transmission performed in the time slot not corresponding to said broadcast signal and holds it until receiving a broadcast signal representing the code synchronization not acquired.

26. An apparatus for making a plurality of terminals have a random access to the reverse common channel of a base station in CDMA, comprising:

code synchronization detection information broadcast means provided in said base station for broadcasting the state information of a channel card in real time for said terminals to recognize the code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of the preambles transmitted from said terminals through said reverse common channel; and

data transmission determination means provided in said terminals for making the terminals to have acquired the code synchronization of the transmitted preambles in said base station continue data transmission and the other terminals stop data transmission,

wherein each of said terminals comprises:

a data generator for generating the data transmitted to said base station;

a data transmitter for transmitting said data generated from said data generator;

a terminal RF signal processor for converting said data from said data transmitter into an RF signal transmitted to said base station and for processing an RF signal received from said base station;

a broadcast signal receiver for receiving a broadcast signal from said terminal RF signal processor to determine the data transmission; and

data transmission determination circuit for controlling said data transmitter to determine whether to make an attempt of transmitting data or to keep on transmitting the data presently under transmission according to said broadcast signal,

wherein said data transmitter is designed to have a transmitted data unit consisting of the preamble and user's data, and the power of said preamble is set different from that of said user's data.

27. An apparatus for making a plurality of terminals have a random access to the reverse common channel of a base station in CDMA, comprising:

code synchronization detection information broadcast means provided in said base station for broadcasting the state information of a channel card in real time for said terminals to recognize the code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of the preambles transmitted from said terminals through said reverse common channel; and

data transmission determination means provided in said terminals for making the terminals to have acquired the code synchronization of the transmitted preambles in said base station continue data transmission and the other terminals stop data transmission,

wherein said base station comprises:

a base station RF signal processor for receiving the RF signal transmitted from the terminal;

a data transceiver for demodulating the signal from said base station RF signal processor to deliver it to an upper hierarchy or another network or vice versa, said data transceiver generating a signal representing whether the received signal synchronization is acquired or no;

a detection determination circuit for receiving the resultant signal of the code synchronization used to determine whether the received signal is acquired or no upon completing the preamble of the data transmitted from said data transceiver;

a broadcast determination circuit for determining the information to broadcast to said terminals according to the detection of the received signal synchronization recognized by said detection determination circuit; and

a broadcast transmitter for controlling said base station RF signal processor to transmit the broadcast signal determined by said broadcast determination circuit at a prescribed power level in a prescribed time.

28. A method for making a plurality of terminals have a random access to the reverse common channel of a base station in CDMA, comprising the steps of:

broadcasting from said base station the state information of a channel card in real time for said terminals to recognize the code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of the preambles transmitted from said terminals through said reverse common channel; and

making the terminals to have acquired the code synchronization of the transmitted preambles in said base station continue data transmission and the other terminals stop data transmission,

wherein the step of making the terminals transmit data comprising the steps of:

generating the data transmitted to said base station;

transmitting said data to said base station;

converting said data into an RF signal transmitted to said base station and processing a broadcast RF signal received from said base station;

receiving the converted broadcast RF signal to determine the data transmission; and

determining whether to make an attempt of transmitting data or to keep on transmitting the data presently under transmission according to said broadcast signal,

wherein the step of transmission determination comprises the step of holding the data transmission until receiving a broadcast signal representing the code synchronization not acquired when it does not perform data transmission or keeps on transmitting data when it has attempted the data transmission in the time slot corresponding to said broadcast signal or stops the data transmission performed in the time slot not corresponding to said broadcast signal and holds it until receiving a broadcast signal representing the code synchronization not acquired, when receiving a broadcast signal representing the detection of the code synchronization in a time slot from said base station.

29. A method for making a plurality of terminals have a random access to the reverse common channel of a base station in CDMA, comprising the steps of:

broadcasting from said base station the state information of a channel card in real time for said terminals to recognize the code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of the preambles transmitted from said terminals through said reverse common channel; and

making the terminals to have acquired the code synchronization of the transmitted preambles in said base station continue data transmission and the other terminals stop data transmission,

wherein the step of making the terminals transmit data comprising the steps of:

generating the data transmitted to said base station;

transmitting said data to said base station;

converting said data into an RF signal transmitted to said base station and processing a broadcast RF signal received from said base station;

receiving the converted broadcast RF signal to determine the data transmission; and

determining whether to make an attempt of transmitting data or to keep on transmitting the data presently under transmission according to said broadcast signal,

wherein the step of data transmission has a transmitted data unit consisting of the preamble and user's data, and the power of said preamble is set different from that of said user's data.

30. A method for making a plurality of terminals have a random access to the reverse common channel of a base station in CDMA, comprising the steps of:

broadcasting from said base station the state information of a channel card in real time for said terminals to recognize the code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of the preambles transmitted from said terminals through said reverse common channel; and

making the terminals to have acquired the code synchronization of the transmitted preambles in said base station continue data transmission and the other terminals stop data transmission,

wherein the step of broadcasting in said base station comprises the steps of:

receiving the RF signal transmitted from the terminal;

demodulating the signal from said base station RF signal processor to deliver it to an upper hierarchy or another network or vice versa, and generating a signal representing whether the received signal synchronization is acquired or no;

receiving the resultant signal of the code synchronization used to determine whether the received signal is acquired or no upon completing the preamble of the data transmitted;

determining the information to broadcast to said terminals according to the detection of the received signal synchronization; and

controlling said base station to transmit the broadcast signal at a prescribed power level in a prescribed time.

31. An apparatus for transmitting a data packet to a base station in a code division multiple access (CDMA) telecommunication system wherein a plurality of terminals randomly access to a reverse common channel, comprising:

means for receiving state information broadcasted from the base station, the state information representing that a code synchronization of the data packet is acquired in the base station, wherein a code synchronization detection is performed based on a preamble of the data packet transmitted from the terminals through the reverse common channel; and

data transmission determination means for determining whether the code synchronization of the data packet is acquired or not based on the state information, allowing the terminal to transmit the data packet in the same time slot as the data packet of which the code

synchronization is acquired if the code synchronization of the data packet is acquired transmitted from the terminal, and allowing the terminal to stop to transmit the data packets, if the code synchronization of the data packet is not acquired.

32. A terminal for transmitting a data packet to a base station in a code division multiple access (CDMA) telecommunication system wherein a plurality of terminals randomly access to a reverse common channel, comprising:

a data generator for generating data packets to be transmitted to the base station;

a data transmitter for transmitting the data packets generated in said data generator;

a terminal RF signal processor for converting the data packets from said data transmitter into a radio frequency (RF) signal and for processing an RF signal received from the base station;

a broadcast signal receiver for receiving a broadcast signal from said terminal RF signal processor, the broadcast signal representing that a code synchronization of the data packet is acquired in the base station, wherein a code synchronization detection is performed based on a preamble of the data packet transmitted from the terminals through the reverse common channel; and

data transmission determination circuit for determining whether the code synchronization of the data packet is acquired or not based on the broadcast signal, allowing the data transmitter to continue to transmit the data packet if the code synchronization of the data packet is acquired transmitted from the terminal, and allowing the data transmitter to stop to transmit the data packets, if the code synchronization of the data packet is not acquired.

33. The terminal as recited in claim 32, wherein the data transmitter is designed to have a transmitted data unit consisting of the preamble and user's data, and the power of the preamble is set different from that of the user's data.

34. A base station for making a plurality of terminals have a random access to a reverse common channel in a code division multiple access (CDMA) system, comprising:

a base station RF signal processor for receiving an RF signal transmitted from the terminal;

a data transceiver for demodulating the RF signal from said base station RF signal processor and generating a data packet to deliver it to an upper hierarchy or another network or vice versa, generating a signal representing whether a code synchronization of the data packet is acquired or not;

a detection determination means for determining whether the data packet is acquired or not upon completing a preamble of the data packet;

a broadcast determination means for determining information representing that the code synchronization of the data packet is acquired, to be broadcasted to the terminals if the code synchronization of the data packet is acquired; and

a broadcast transmitter for controlling the information representing that the code synchronization of the data packet is acquired, to be broadcasted to the terminals at a predetermined power level in a predetermined time.

35. The base station as recited in claim 34, wherein said detection determination means determines the initial code synchronization and the tracking of the synchronization in a given time before completion of a preamble transmission to make said terminals perform the precise operation in the beginning of the slot.

36. The base station as recited in claim 34, wherein said detection determination means searches the codes around the beginning of each time slot for a duration that may vary from the length of the time slot to the length of the preamble.

37. The base station as recited in claim 36, wherein said broadcast determination means determines the broadcast signal only with a single bit representing the detection of the synchronization in the preamble.

38. The base station as recited in Claim 36, wherein said broadcast transmitter transmits the broadcast signal determined by said broadcast determination means through an additional channel using a different code other than the presently used code at every time of completing the slot.

39. The base station as defined in Claim 36, wherein said broadcast transmitter transmits the broadcast signal determined by said broadcast determination means at every time of completing the slot in the punctured form having the power control bit transmitted through the pilot channel and a time offset.

40. A method for transmitting a data packet to a base station in a code division multiple access (CDMA) telecommunication system wherein a plurality of terminals randomly access to a reverse common channel, comprising the steps of:

a) receiving state information broadcasted from the base station, the state information representing that a code synchronization of the data packet is acquired in the base station, wherein a code synchronization detection is performed based on a preamble of the data packet transmitted from the terminals through the reverse common channel; and

b) determining whether the code synchronization of the data packet is acquired or not based on the state information, allowing the terminal to transmit the data packet in the same time slot as the data packet of which the code synchronization is acquired if the code synchronization of the data packet is acquired transmitted from the terminal, and allowing the terminal to stop to transmit the data packets, if the code synchronization of the data packet is not acquired.

41. A method for transmitting a data packet to a base station in a code division multiple access (CDMA) telecommunication system wherein a plurality of terminals randomly access to a reverse common channel, comprising the steps of:

a) at a data generator, generating data packets to be transmitted to the base station;

b) at a data transmitter, transmitting the data packets generated in the data generator;

c) at a terminal RF signal processor, converting the data packets into a radio frequency (RF) signal and for processing an RF signal received from the base station;

d) at a broadcast signal receiver, receiving a broadcast signal from said terminal RF signal processor, the broadcast signal representing that a code synchronization of the data packet is acquired in the base station, wherein a code synchronization detection is performed based on a preamble of the data packet transmitted from the terminals through the reverse common channel; and

e) at data transmission determination means, determining whether the code synchronization of the data packet is acquired or not based on the broadcast signal, allowing the data transmitter to continue to transmit the data packet if the code synchronization of the data packet is acquired transmitted from the terminal, and allowing the data transmitter to stop to transmit the data packets, if the code synchronization of the data packet is not acquired.

42. The method as recited in claim 41, wherein the data packet includes the preamble and user's data, and the power of the preamble is set different from that of the user's data.

43. A method for making a plurality of terminals have a random access to a reverse common channel in a code division multiple access (CDMA) system, comprising:

a) at a base station RF signal processor, receiving an RF signal transmitted from the terminal;

b) at a data transceiver, demodulating the RF signal from said base station RF signal processor and generating a data packet to deliver it to an upper hierarchy or another network or vice versa, generating a signal representing whether a code synchronization of the data packet is acquired or not;

c) at a detection determination means, determining whether the data packet is acquired or not upon completing a preamble of the data packet;

d) at a broadcast determination means, determining information representing that the code synchronization of the data packet is acquired, to be broadcasted to the terminals if the code synchronization of the data packet is acquired; and

d) at a broadcast transmitter, for controlling the information representing that the code synchronization of the data packet is acquired, to be broadcasted to the terminals at a predetermined power level in a predetermined time.

44. The method as recited in claim 43, wherein in the step c) the codes are searched around the beginning of each time slot for a duration that may vary from the length of the time slot to the length of the preamble.

45. An apparatus for making a plurality of terminals have a random access to the reverse common channel system in CDMA, as defined in claim 7, wherein said broadcast transmitter transmits the broadcast signal determined by said broadcast determination circuit through an additional channel using a different code other than the presently use code at the boundary of each time slot.

46. A method for making a plurality of terminals have a random access to the reverse common channel in CDMA, as defined in claim 14, wherein the step of broadcasting in said base station comprises the steps of:

receiving the RF signal transmitted from the terminal;

demodulating the signal from said base station RF signal processor to deliver it to an upper hierarchy or another network or vice versa, and generating a signal representing whether the received signal synchronization is acquired or no;

receiving the resultant signal of the code synchronization used to determine whether the received signal is acquired or no upon completing the preamble of the data transmitted;

determining the information to broadcast to said terminals according to the detection of the received signal synchronization; and

controlling said base station to transmit the broadcast signal at a prescribed power level in a prescribed time.

47. A method for making a plurality of terminals have a random access to the reverse common channel system in CDMA, as defined in claim 19, wherein the step of controlling said base station transmits the broadcast signal through using a different code other than the presently used code at the boundary of each time slot.